1   WHAT IS CLAIMED IS:

2   1.   A stereoscopic image processing apparatus for

3   calculating a parallax between a pair of images, comprising:

4   correlation evaluating means for evaluating a

5   correlation of brightness between a first pixel block provided

6   in one of said pair of images and a second pixel block provided

7   in the other of said pair of images; and

8   region size changing over means for changing over a

9   size of said first and second pixel blocks in evaluating said

10   correlation.

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12   2.   The stereoscopic image processing apparatus according

13   to claim 1, wherein said size of said first and second pixel blocks

14   is changed over in accordance with an area where said first pixel

15   block is located.

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17   3.   The stereoscopic image processing apparatus according

18   to claim 2, wherein said area is divided into two areas, an upper

19   area and a lower area, by a horizontal boundary line.

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21   4.   The stereoscopic image processing apparatus according

22   to claim 3, wherein said size of said first and second pixel blocks

23   is changed over to said first size when said first pixel block

24   is located in said lower area.

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1   5.   The stereoscopic image processing apparatus according

2   to claim 2, wherein said area is divided into a plurality of areas

3   and said size of said first and second pixel blocks is changed

4   over to respective specified size of said first pixel block in

5   accordance with said respective areas where said first pixel block

6   is located.

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8   6.   The stereoscopic image processing apparatus according

9   to claim 1, wherein said first and second pixel blocks have a

10 first size and a second size which is larger than said first size.

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12 7.   The stereoscopic image processing apparatus according

13 to claim 1, wherein said size of said first and second pixel blocks

14 is changed over in accordance with imaging conditions including

15 at least rain, fog, snow, backlight, nighttime, snow on road,

16 stain or droplet on front windshield.

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18 8.   A stereoscopic image processing apparatus for

19 calculating a parallax between a pair of images, comprising:

20   correlation evaluating means for evaluating a

21 correlation of brightness between a first pixel block provided

22 in one of said pair of images and a second pixel block provided

23 in the other of said pair of images;

24   weighting factor means for applying weighting a factor

25 to each of pixel constituting said first and second pixel blocks

1   in evaluating said correlation; and

2   weighting factor changing over means for changing over

3   said weighting factor in evaluating said correlation.

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5   9.   The stereoscopic image processing apparatus according

6   to claim 8, wherein said weight factor is established to 0 at

7   a surrounding region around a central region of said first and

8   second pixel blocks.

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10   10.   A   stereoscopic   image   processing   method   of

11   calculating a parallax between a pair of images, comprising the

12   steps of:

13   evaluating a correlation of brightness between a first

14   pixel block provided in one of said pair of images and a second

15   pixel block provided in the other of said pair of images; and

16   changing over a size of said first and second pixel

17   blocks.

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19   11.   The method according to claim 10, wherein the step of

20   changing over said first and second pixel blocks includes changing

21   over in accordance with an area where said first pixel block is

22   located.

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24   12.   The method according to claim 11, further comprising

25   the step of dividing said area into two areas, an upper

1   area and a lower area, by a horizontal boundary line.

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3   13,   The method according to claim 11, further comprising

4   the step of dividing said area into a plurality of areas by a

5   plurality of boundary lines.

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7   14.   A stereoscopic image processing method of calculating

8   a parallax between a pair of images, comprising the steps of:

9   evaluating a correlation of brightness between a first

10   pixel block provided in one of said pair of images and a second

11   pixel block provided in the other of said pair of images;

12   applying weighting a factor to each of pixel

13   constituting said first and second pixel blocks in evaluating

14   said correlation; and

15   changing over said weighting factor in evaluating said

16   correlation.

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